

REMARKS

Prior to entry of the present Amendment, Claims 1-38 are pending in the application. In the present Office action, Claims 1-18 stand rejected, and Claims 19-38 being withdrawn from consideration. By this Amendment, Claims 1, 4-5, 7-9 and 13-17 are amended, Claims 6, 10-12 and 18-38 are cancelled without prejudice, new Claims 39-41 are added, and original Claims 2-3 are unchanged. Applicants gratefully acknowledge the Examiner's indication that Claims 7-9, 14 and 16 include allowable subject matter.

Applicants appreciate the Examiner's time and consideration during a telephone interview with Applicants' Representative Chad W. Shea (Reg. No. 48,470) on May 8, 2003. As discussed below in more detail, Applicants' Representative and the Examiner discussed the rejections under 35 U.S.C. § 112, second paragraph.

Claims 6, 10-12 and 18-38 are cancelled without prejudice. Applicants reserve the right to re-present the cancelled claims and similar claims in a divisional application.

Applicants have amended the specification to include the priority claim made when the application was filed. Applicants request entry of this amendment to the specification.

Rejections under 35 U.S.C. § 112

Claims 1-18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner contends that it is not clear what is meant by the winding being wound "in one of the first direction and the second direction".

As discussed with the Examiner during the telephone interview, the use of "in one of a first direction and a second direction" in the originally filed claims refers to how a winding is selectively wound on the winding support structure. In exemplary field assemblies according to the invention, such as the field assembly illustrated in FIGS. 4 and 5 of the present application, each winding is selectively wound on a winding support structure in only one direction at a time. As illustrated in FIGS. 4 and 5, a single field assembly may include more than one winding wound in this manner. Additionally, some field assemblies according to the invention, such as the field assembly illustrated in FIGS. 6 and 7 of the present application, may include two separate windings (e.g., a run coil and a brake coil) wound around the same sets of winding support structures in this manner. New dependent Claims 40-41 recite a "generally clockwise direction" and a "generally counterclockwise direction" as suggested by the Examiner.

However, Applicants have maintained the use of a “first direction” and a “second direction” in the remaining claims.

Based on the telephone interview and the present Amendment, Applicants believe the rejections based on the use of “one of a first direction and a second direction” have been resolved. Applicants have amended Claims 1 and 4-5 to clarify how the winding is selectively wound in one of the first direction and the second direction and have canceled Claim 6. To selectively wind the winding in the first direction, the winding is wound around the winding support structure and the wire redirection structure. To selectively wind the winding in the second direction, the winding is wound around the winding support structure and not wound around the wire redirection structure.

As discussed with the Examiner during the telephone interview, a field assembly according to the present invention can be selectively wound to provide a standard wound field assembly or selectively wound to provide a reverse wound field assembly. For example, the field assembly of FIG. 4 illustrates the winding selectively wound around the winding support structure in a generally clockwise direction and not wound on the wire redirection structure to provide a standard wound field assembly, while the field assembly of FIG. 5 illustrates the winding selectively wound around the winding support structure in a generally counterclockwise direction and wound on the first and second posts of the wire redirection structure to provide a reverse wound field assembly. In other constructions, the winding may be selectively wound around the winding support structure in a counterclockwise direction and not wound on the wire redirection structure to provide a standard wound field assembly, or selectively wound around the winding support structure in a clockwise direction and wound around the first and second post of the wire redirection structure to provide a reverse wound field assembly.

Although Applicants have amended Claims 1 and 4-5 to clarify that, in the first direction, the winding is wound on the wire redirection structure and that, in the second direction, the winding is not wound on the wire redirection structure, the interchangeability of the winding process is still covered by these claims. That is, the first direction may be a generally clockwise direction, a generally counterclockwise direction, or any other direction that provides a first polarity, and the corresponding second direction may be a generally counterclockwise direction, a generally clockwise direction, or any other direction that provides a second polarity that is different than the first polarity, respectively.

In view of the foregoing, Applicants respectfully contend that the rejections under 35 U.S.C. § 112, second paragraph, have been overcome. Accordingly, Applicants respectfully request reconsideration of these rejections.

Newly-independent Claim 7 has been amended to include all of the limitations of the base claim and any intervening claims and to overcome the rejections under 35 U.S.C. § 112, second paragraph. Accordingly, newly-independent Claim 7 is allowable. Claims 8-9 depend from independent Claim 7 and are allowable for the same and other reasons.

Newly-independent Claim 14 has been amended to include all of the limitations of the base claim and any intervening claims and to overcome the rejections under 35 U.S.C. § 112, second paragraph. Accordingly, newly-independent Claim 14 is allowable. Claims 15-17 and new Claim 40 depend from independent Claim 14 and are allowable for the same and other reasons.

Rejections under 35 U.S.C. § 103

Claims 1-6, 10-13, 15 and 17-18 stand rejected under the cited prior art. Specifically, the Examiner rejected Claims 1 and 4 as being unpatentable or obvious over U.S. Patent No. 5,535,503 ("Newman") in view of U.S. Patent No. 5,341,997 ("Luciani '997"). Also, the Examiner rejected Claims 2 and 3 as being unpatentable over Newman and Luciani '997 in view of U.S. Patent No. 6,034,461 ("Sun"). Claims 5-6, 10-12, 15, and 17-18 are rejected as being unpatentable over Newman and Luciani '997 and further in view of U.S. Patent No. 5,392,506 ("Luciani '506"). Finally, Claim 13 is rejected as being unpatentable over Newman, Luciani '997 and Luciani '506 further in view of Sun.

Independent Claim 1 defines a field assembly for an electric motor, the field assembly comprising a field core having a winding support structure, a wire redirection structure supported by the field core, and a winding selectively wound on the winding support structure in one of a first direction, to provide a first polarity, and a second direction, to provide a second polarity, the second polarity being different than the first polarity. Claim 1 specifies that, to selectively wind the winding in the first direction, the winding is wound around the winding support structure and the wire redirection structure, and that, to selectively wind the winding in the second direction, the winding is wound around the winding support structure and not wound around the wire redirection structure.

Newman discloses a method of manufacturing field assemblies that provides a slack condition in the wire that extends from a stator coil to a terminal receptacle mounted on the stator core. A guide arm (114) having a wire guide finger (124) is supported adjacent the terminal receptacle as the winding is wound on the field core. The winding is wound over the wire guide finger (124) which is removed after the manufacturing process to provide the slack condition.

Newman does not teach or suggest, among other things, a field assembly including having a winding selectively wound on the winding support structure in one of a first direction and a second direction. Instead, Newman discloses a field assembly that is intended to be wound in only a single direction. Also, Newman does not teach or suggest such a winding selectively wound on the winding support structure in one of a first direction, to provide a first polarity, and a second direction, to provide a second polarity, the second polarity being different than the first polarity, as defined in Claim 1. If Newman were to provide a first field assembly having a winding providing a first polarity and a second field assembly having a winding providing a second polarity, the respective windings of such field assemblies of Newman would not be wound as set forth in Claim 1. In Newman, the winding is always wound around the wire guide finger (124), and the wire guide finger (124) is always removed from the field assembly after winding. For these and other reasons, Newman does not teach or suggest the subject matter defined by independent Claim 1.

Luciani '997 does not cure the above discussed deficiencies of Newman. Luciani '997 discloses a stator winding machine for manufacturing a field assembly. The machine includes a winding needle 16 and a lead-pulling assembly 18 having a lead pull 30. Once winding is completed by the needle 16, the lead pull 30 grips and pulls the wire 31, 33 to a temporary terminating finish lead holder 32, 34 on the machine so that the wire 31, 33 can be cut. The needle 16 is then positioned to align the wires 31, 33 to wind the next stator.

Luciani '997 does not teach or suggest, among other things, a field assembly including a wire redirection structure supported by the field core. The Examiner contends that the "a wire redirection structure" is shown in Fig. 5 of Luciani '997. However, the lead pull 30 is a wire redirection structure supported by the field core. The lead pull 30 is a part of the machine, not a part of the stator of Luciani '997. Also, Luciani '997 does not teach or suggest a winding selectively wound on the winding support structure in one of a first direction and a second

direction. Instead, Luciani '997 discloses a stator that is intended to be wound in only a single direction.

In addition, Luciani '997 does not teach or suggest such a winding selectively wound on the winding support structure in one of a first direction, to provide a first polarity, and a second direction, to provide a second polarity, the second polarity being different than the first polarity, as defined in Claim 1. If Luciani '997 were to provide a first stator having a winding providing a first polarity and a second stator having a winding providing a second polarity, the respective windings of such stators of Luciani '997 would not be wound as set forth in Claim 1. In Luciani '997, the lead pull 30 always grips and pulls the wire 31, 33 to a temporary terminating finish lead holder 32, 34 on the machine so that the wire 31, 33 can be cut after winding, and the lead pull 30 is always removed from the stator after winding. For these and other reasons, Luciani '997 does not teach or suggest the subject matter defined by independent Claim 1.

Applicant realizes that the Examiner is relying on Luciani '997 only for the teaching of "a wire redirection structure". However, Applicant respectfully contends that the lack of the above-described and other elements in the teachings of Luciani '997 is relevant because Luciani '997 does not teach or suggest many of the same things lacking from Newman, and, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Further, there is no suggestion at all in the references that the teachings of the references should or could be combined.

For these and other reasons, Newman and Luciani '997, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 1. Accordingly, independent Claim 1 is allowable. Dependent Claims 2-5 and new dependent Claims 39-40 depend from independent Claim 1 and are allowable for the same and other reasons.

Claims 2-5 depend from independent Claim 1. The Examiner rejected Claims 2-3 as being unpatentable over Newman and Luciani '997 in view of Sun, Claim 4 as being unpatentable over Newman in view of Luciani '997, and Claim 5 as being unpatentable over Newman and Luciani '997 and further in view of Luciani '506. As discussed above, Newman and Luciani '997, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 1. Among other things, the additional cited prior art does not cure the above discussed deficiencies of Newman and/or Luciani '997. Accordingly, Newman, Luciani '997, and the additional cited prior art, alone or in combination, do not teach or suggest the subject

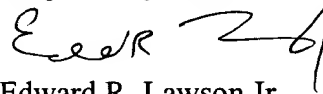
matter defined by independent Claim 1 or by dependent Claims 2-5. Therefore, dependent Claims 2-5 are allowable for these and other reasons, as well as the reasons discussed above.

CONCLUSION

In view of the foregoing, entry of the present Amendment and allowance of Claims 1-5, 7-9, 13-17 and 39-41 are respectfully requested.

During normal business hours, for telephone consultation, the undersigned is available at the telephone number listed below, and Applicants' Representative Chad W. Shea is available at (262) 956-6525.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "E. R. Lawson Jr.", with a stylized flourish at the end.

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